

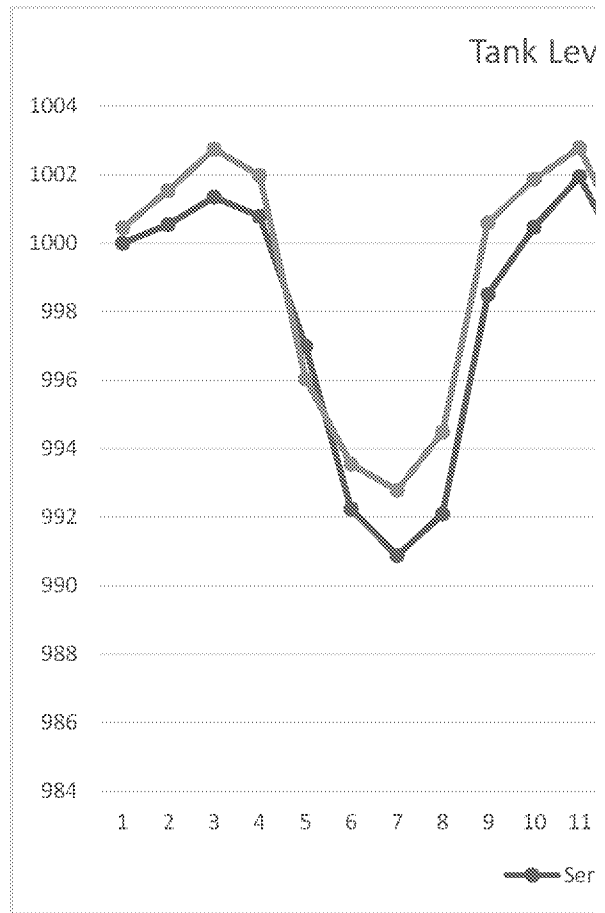
APM Example of GIS to EPANET Model Development

Time Series Plot - Head for Node T1

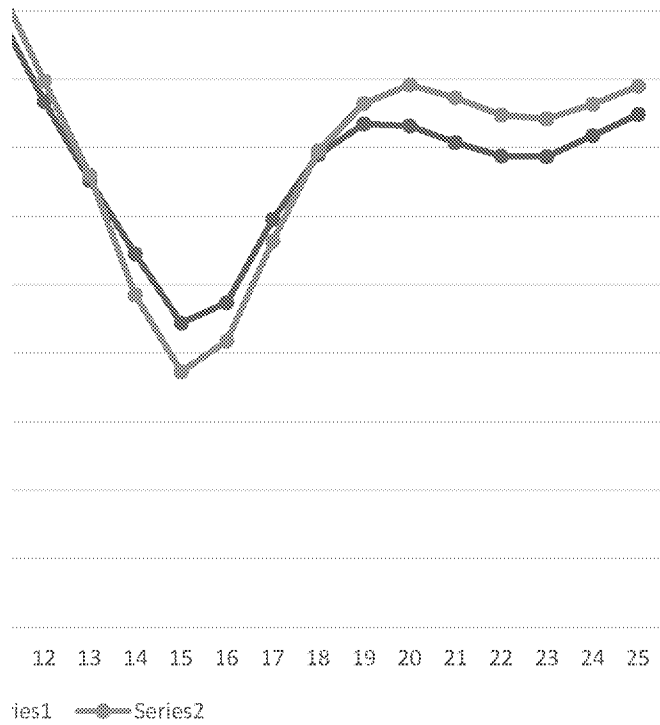
Series	Time (hours)	Computed	Observed	delta
Computed	0	1000	1000.45	-0.45
Computed	1	1000.548	1001.528	-0.98
Computed	2	1001.3528	1002.7528	-1.4
Computed	3	1000.781	1001.981	-1.2
Computed	4	996.9879	996.0379	0.95
Computed	5	992.2401	993.5401	-1.3
Computed	6	990.8815	992.7815	-1.9
Computed	7	992.0823	994.4823	-2.4
Computed	8	998.4985	1000.5985	-2.1
Computed	9	1000.4753	1001.8753	-1.4
Computed	10	1001.9398	1002.7898	-0.85
Computed	11	999.3488	999.9488	-0.6
Computed	12	997.0504	997.2004	-0.15
Computed	13	994.8958	993.6958	1.2
Computed	14	992.8812	991.4512	1.43
Computed	15	993.4696	992.3496	1.12
Computed	16	995.8976	995.2676	0.63
Computed	17	997.8	997.9	-0.1
Computed	18	998.6831	999.2831	-0.6
Computed	19	998.631	999.831	-1.2
Computed	20	998.1556	999.4556	-1.3
Computed	21	997.7494	998.9494	-1.2
Computed	22	997.74	998.84	-1.1
Computed	23	998.344	999.274	-0.93
Computed	24	998.9676	999.7876	-0.82

Pump Status

P1	P2	P3
0 On	On	Off
1 On	On	Off
2 On	On	Off
2:38 On	Off	Off
4 On	Off	Off
5 On	Off	Off
5:02 On	On	Off
6:40 On	On	On
0:00 On	On	On
8:18 On	On	Off
9:58 On	Off	Off
11 On	Off	Off
12 On	Off	Off
13 On	Off	Off
14 On	Off	Off
14:28 On	On	Off
16 On	On	Off
17 On	On	Off
18 On	On	Off
19 On	On	Off
20 On	On	Off
21 On	On	Off
22 On	On	Off
23 On	On	Off
24 On	On	Off



el Comparison



Field Flow Tests

Test #1	Static	Residual	Flow	Date	Time
J114	77	28	2880	22-Sep	10:15
J115	78	44			

Test #1
J114
J115

Test #2	Static	Residual	Flow	Date	Time
J113	80	29	2940	22-Sep	10:30
J116	77	43			

Test #2
J113
J116

With closed pipe					
Test #3	Static	Residual	Flow	Date	Time
P816	Closed				
J113	80	9	1650	22-Sep	10:45
J116	77	22			

Test #3
P816
J113
J116

$$C = 3.551 \times Q \times D^{-2.63} \times L^{0.54} \times H^{-0.54} = 103$$

			HGL	HGL		
			Static	Residual		
HL Total =	30.03	Feet	J113	185	21	HL Total =
Elevation Change =	7	Feet	J116	178	51	
Pipe Footage =	424	Feet				

Computed Flows

Static	Residual	Flow
77	34.5	3188
78	47	

Static	Residual	Flow
80	33.5	3141
77	48	

With closed pipe		
Static	Residual	Flow
80	15	2100
77	28	

30	Feet
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